

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A polarization independent optical filter comprising:
a planar waveguide layer;
a grating layer adjacent to said planar waveguide layer wherein said grating layer comprises a plurality of diffraction elements patterned as a two-dimensional array exhibiting periodicity in first and second orthogonal directions, each diffraction element comprising a longitudinal pillar having a maximum lateral dimension of less than 600 nanometers.
2. (Withdrawn) The polarization independent optical filter according to claim 1 wherein said waveguide layer is formed overlying a substrate layer.
3. (Withdrawn) The polarization independent optical filter of claim 1 wherein said waveguide layer and said grating layer are composed of a transparent dielectric material and the index of refraction of said waveguide layer is greater than the effective index of said grating layer.
4. (Withdrawn) The polarization independent optical filter according to claim 1 wherein the periodicity in said first and second orthogonal directions is equal.
5. (Withdrawn) The polarization independent optical filter according to claim 1 wherein said plurality of diffraction elements are circular pillars.

6. (Withdrawn) The polarization independent optical filter according to claim 1 wherein the spacing between successive diffraction elements in both orthogonal directions is less than a wavelength of the light to be filtered.

7. (Withdrawn) The polarization independent optical filter according to claim 2 wherein said substrate is composed of a transparent dielectric material having an index of refraction less than the refractive index of said waveguide layer.

8. (Currently Amended) ~~A method of making an optical subwavelength resonant gratin filter comprising the steps of:~~

~~providing a workpiece comprising a waveguide layer, an adjacent unpatterned grating layer and a moldable layer overlying the grating layer;~~

~~providing molding surface comprising one or more projecting features patterned to form a periodic array;~~

~~pressing the molding surface against the moldable layer to produce a pattern of reduced thickness regions, in the moldable layer;~~

~~removing material from the reduced thickness regions to expose the grating layer; and~~

~~processing the exposed grating layer to form a periodic grating array~~ A method of making a device comprising the steps of:

providing a substrate including a moldable surface;

providing a mold having a molding surface comprised of protruding features and recessed features forming a mold pattern for imprinting a periodic

array of nanoscale features each with at least one lateral dimension of 200 nanometers or less;

urging together the molding surface and moldable surface thereby imprinting the pattern in the moldable surface;

separating the molding surface and the moldable surface; and
reproducing the pattern in the substrate or in another material
added onto the substrate.

9. (Previously Presented) The method of claim 8 wherein the molding surface is patterned to produce reduced thickness regions in the moldable layer forming an array of projecting pillars.

10. (Previously Presented) The method of claim 8 wherein the molding surface is patterned to produce reduced thickness regions in the moldable layer forming an array of recessed holes.

11. (Previously Presented) The method of claim 8 wherein the molding surface is pressed against the moldable layer by pressing with a mechanical press.

12. (Previously Presented) The method of claim 8 wherein the molding surface is pressed against the moldable layer by pressing with pressurized fluid.

13. (Previously Presented) The method of claim 8 wherein the molding surface is pressed against the moldable layer by pressing with electrostatic force.

14. (Previously Presented) The method of claim 8 wherein the molding surface is pressed against the moldable layer by pressing with magnetic force.

15. Cancelled.

16. (Currently Amended) The method of claim 9 wherein the pillars have a maximum lateral dimension of less than 6200 nanometers.

17. (Currently Amended) The method of claim 10 wherein the holes have a maximum lateral dimension of less than 6200 nanometers.

18. (Previously Presented) The method of claim 8 wherein the array is spaced apart by a periodic spacing in the range 200 nanometers to 1.2 micrometers.

19. (New) A method of making a device comprising a periodic array of holes or pillars comprising the steps of:

providing a mold having a molding surface comprised of protruding features and recessed features for imprinting a pattern comprising an array of holes or pillars;

urging together the molding surface and the moldable surface to imprint the pattern into the moldable surface;

separating the molding surface and the moldable surface; and

reproducing the pattern in the substrate or in another material added onto the substrate.